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ABSTRACT

Offered in the hope that the information provided will be useful internationally, this book describes reading disabilities primarily in connection with special education in Denmark. The 14 chapters are as follows: (1) Background of Special Education in Denmark; (2) The Extent of Special Education; (3) Educational and Psychological Investigations; (4) Educational and Psychological Tests; (5) Facilities and Methods for Reading Remediation; (6) Results of Remedial Methods Used; (7) A Study Based on a Longitudinal Section; (8) "The Two Percent Most Heavily Reading Disabled Pupils"; (9) A Cross-Scandinavian Co-operation, a Theory of Development, and Some Consequences; (10) "Linguistic Awareness"--A Central Concept in a Development Work; (11) Medication; (12) John--A Case of Severe Reading Retardation; (13) Research; and (14) Bibliography (with 41 items). (SR)

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- under medvirken af
Jørgen Frost og Jørgen Chr. Nielsen

Special Education in Denmark – with particular Emphasis on Reading Disabilities

Reading Disabilities – An International Perspective

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Ministry of Education and Research

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PREFACE

"Special Education in Denmark - with particular Emphasis on Reading Disabilities" was ordered and written especially for an international composite work. However, the foreign publishing house in charge of the collection of the material ran into a series of problems, a.o. in connection with the gathering of material from a sufficient number of countries.

Since a long time may thus elapse before the planned work will be published, we have - in concert with the U.S. editor and the European publishers - arranged with The Directorate of the Danish school, Folkeskolen, that the material will now be published in this preliminary form.

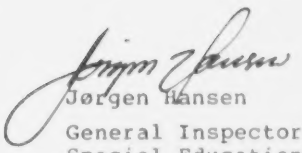
The starting point of the work was a description of reading disabilities seen in an international perspective. A number of descriptions from various countries were to have formed the basis of some subsequent chapters.

The writers of the Danish chapter chose to describe reading disabilities primarily in connection with the special education in Denmark - though naturally with references to the ordinary education and to prophylactic aspects.

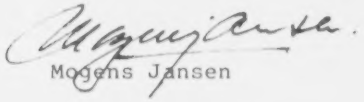
The Directorate of Folkeskolen (represented by Jørgen Hansen, General Inspector of Special Education) agreed to participate in the publication of the material which has been prepared by the six writers mentioned.

The booklet has been written at The Danish Institute for Educational Research and copied by The Directorate of Folkeskolen.

The writers as well as The Danish Institute for Educational Research and The Directorate of Folkeskolen, who co-operated successfully about this task, all hope that the information provided by the booklet will prove useful in connection with Denmark's co-operation with foreign countries.



Jørgen Hansen
General Inspector of
Special Education



Mogens Jansen
Research Director

The edition closed on August 1989
The bibliography has to some degree been updated as per May 1st, 1989.

BACKGROUND OF THE SPECIAL EDUCATION IN DENMARK

The Danish school, Folkeskolen, offers education for all children and young persons - naturally including children and young with heavy developmental problems and handicaps. In the sense of the Education Act, all children are considered "normal", and, consequently, they are taught according to a common educational legislation, common curricula, and common educational guides.

In 1969 the Danish Parliament, Folketinget, in complete agreement passed a resolution about the largest possible integration of children and young in the ordinary school system. This meant that the education of the handicapped children was to be organized according to the following two principles: the least intervention and the nearest school. If possible, the education was to be offered at the district school.

In the course of the 1970s both an extensive educational and an organizatory change of the Folkeskolen took place, in order that the resolution about integration could be carried out in practice. These years, a large number of pupils from the public assistance were integrated in Folkeskolen.

In 1980 an act was implemented to secure education within Folkeskolen for all children and young.

This act also included offers for special education and other special educational aid for all children and young of 0-18 with developmental problems and handicaps. This offer for special education is to be implemented through the school psychological guidance established in connection with every local school system.

The compulsory education starts in the calendar year in which the child completes its 7th year; however, it is possible for the children to start in grade 1 at the age of 6. The compulsory education includes 9 years. Apart from that the school offers kindergarten class for everyone as well as grade 10 for everyone. Young handicapped are offered education in Folkeskolen until they are 18.

Not all children receive their education in Folkeskolen. Well over 9% are instructed in private schools which are often founded on the initiative of organizations or groups of parents for religious, ideological, or educational reasons. Private schools have abt. 65% of their expenses paid by the public. The expenses for severely handicapped children in private schools are paid 100% by the public.

A smaller group of children and young (below 1%) live and are taught in 24-hour-institutions. These are primarily children with domestic or behaviour problems, children with heavy sensory or motor handicaps, and children with extensive general developmental problems. The other children living in the 24-hour-institutions receive their education at the local schools.

Since 1980, Folkeskolen has been under an obligation to give assistance to all pupils whose development and education call for special consideration and support. In the wording of the Act it said, "Special education will be arranged for children who are unable to follow the ordinary education with a sufficient profit". In principle, this wording is an expression that the educational needs of the child are decisive for the implementation of special education, rather than an educational and psychological diagnosis.

This reflects that instead of a diagnosed handicap, the starting point of the implementation of a special education may now be an educational need. In other words, the focus is transferred from the deficits of the child to the possibilities of the education in relation to the needs of the child.

Even if thus, in principle, importance should not be attached to a classification of the difficulties of the child in school, but to a description of the particular educational needs of the child, the special education is, to a high degree, organized according to diagnostic groups. The ministerial provisions for the special education are still founded on a basic view of classification, but the Ministry of Education is now (1987) preparing a change so that reference to special

education does not call for a diagnostic classification of the child or the young person.

The integration during the 1970s was effected in school through an extension of the traditional special schools and special classes by special education and in many cases also by individual programs of special education. This was a condition of the realization of the political resolution on integration of 1969, but it considerably increased the educational expenses of Folkeskolen for children and young people with handicaps.

Financially and administratively the special education is divided into two areas: the municipal special education effected by the municipal educational systems and including abt. 12% of the pupils of Folkeskolen, and the extensive special education which includes 1% of the pupils of Folkeskolen and of which the 15 counties in Denmark are in charge.

THE EXTENT OF THE SPECIAL EDUCATION

During the school year 1984/85 not quite 13% of the pupils of Folkeskolen received special education. The number includes all pupils receiving special education in some form for a shorter or a longer period during that year. Thus the total includes pupils attending special schools/special classes, pupils receiving constant supplementary aid in connection with their education in an ordinary school class, and pupils who have received special education for a short period of time, e.g. due to minor speech or reading problems.

As far as 1.63% are concerned, the principal reason for reference to special education in 1984/85 was specific physical problems (reduced hearing, sight, speech, or mobility). Another 1.62% were referred on account of general learning difficulties. 1.56% were characterized by behaviour problems. For 7.84% the primary causes of the reference were difficulties concerning specific subjects (particularly reading, sometimes mathematics or foreign languages).

More than 80% of the pupils within special education receive the special education in - or in connection with - the ordinary class to which they belong. The largest frequency of reference concerns the pupils in grade 4, 5, and 6 where they are abt. 10-12 years old.

At least two clear lines of development can be observed within the supplementary special education effected in connection with the home class:

One line of development is towards the establishment of early special education - in many cases with a profit already in the very early years, when some of the very youngest are in day nurseries or other institutions. From the age of 3-6 the children may attend a kindergarten, and many do so, either on a part-time basis or on an all-day basis.

This trend is supported by the legislation of 1980 obliging the school to offer special education and other special educational aid in the form of guidance and facilities for these 0-6-year-olds with developmental problems or handicaps.

The other line of development can be seen as a still increasing rating of intensive courses (e.g. reading courses for 10-15 lessons a week during a period of 3-6 months). Such a concentration of a special education results partly in fewer cases of intervention during the school year and partly in a larger educational profit than is obtained through special education for a few lessons a week during a number of years.

In several school systems experiments with special education in the classroom have been carried out. The special education takes place in the ordinary class with the special education teacher co-operating with the child's ordinary teachers.

Figure 1. General rules for the Danish School

Objectives and contents:	Play and other activities promoting development	The Minister of Education lays down directives on the objectives of the teaching of each subject and distributes directive plans for the distribution of lessons and curricula.										
The dimensions of compulsory elementery education:	Voluntary Education	Compulsory Education										Voluntary Education
Grade:	Kindergarten class	1	2	3	4	5	6	7	8	9	10	
Age in the calendar year in question:	6 years	7 years								16 years		
Official Leaving Examinations:												

Children with speech and/or hearing disorders receive special education at the age of early childhood (0-6 years), most often at the age of 3-6.

EDUCATIONAL AND PSYCHOLOGICAL INVESTIGATIONS

Children and young with particular educational needs can be described in two ways: either by a diagnostic classification of the pupil's handicap or by a description of the particular educational support which the child or the young person needs.

The diagnostic classification builds on a description of the pupil's handicap and is based on relatively objective criteria. It will be valid and educationally useful in connection with e.g. moderately or severely physical-developmentally disabled pupils, pupils with sensory handicaps (speech, sight, hearing), pupils with extensive specific learning difficulties (e.g. neurological deviations), pupils with a strongly deviating personality development, and pupils with pronounced and heavy reading and writing difficulties.

By way of example, the description of pupils with the particular support needed by the pupil as a starting point, could include these groups: children who are slow learners; children who are slow beginners in school and are not ready to utilize actual instruction until in the course of the first school year; children with periodical family problems as one of the reasons for their difficulties in school; children who have received insufficient instruction, and children with small, but educationally interfering linguistic and cognitive deviations which impede their learning processes.

Naturally, there is no division of children into these two groups(!). The groups represent two different principles of work for the school psychological guidance responsible for the examination and guidance in connection with children with learning problems, developmental problems, and handicaps.

Basis of the investigation and guidance

In Denmark the classroom teacher is almost always mother tongue teacher (= teacher in Danish, reading, literature, etc.) and follows, in principle, the class during the entire schooling from grade 1 to grade 9 (10); on an average, the classroom teacher follows the individual pupil for 5-7 years.

In most cases the classroom teacher teaches at least half of the appr. 20 lessons a week which Danish children receive during the first years in school. It has become a more and more general feature that appart from teaching "Danish" (equal to "reading" and "English", etc.), the classroom teacher often teaches religion and in some cases also one or more other subjects (e.g. biology, history, or geography) which, to some degree, corresponds to social science and natural science.

Thus the teacher acquires a thorough knowledge of his/her pupils which enables him/her to follow their progress in the subjects as well as their social and personal development very closely and, to some degree, to adapt his/her instruction to the different needs of the children.

At the same time the classroom teacher is able to evaluate the effect of his/her teaching and to correct it for inappropriate aspects, if any. This attitude towards the pupils has spread to most of the teachers and to almost every subject.

All the local school systems in Denmark have a school psychological guidance attached to them. The school psychological guidance is often called upon on the initiative of the classroom teacher - or another teacher - or the parents. In some schools it is now becoming usual that also pupils, mainly older pupils, approach the school psychological guidance in order to ask for (confidential) help.

The staff of the school psychological guidance represents different professions and usually consists of school psychologists (psychologists trained as both teachers and psychologists), clinical psychologists (psychologists trained as such and with a particular education in child therapy), social workers and consultants for the special education. The school psychological guidance is an integral part of the school system, working very closely together with the school and the teachers.

The number of social workers is considerably smaller, and so is the number of consultants for the special education - viz. appr. 150. Moreover, the latter group very seldom has more than two thirds of its time available as advisers for their colleagues. Usually the consultants for the special education also

carry out ordinary instruction or instruction in reading clinics, special classes, etc. besides their work as consultants.

It is the aim that everybody teaching in the special education has a rather large part of his/her lessons in reading clinics, or the like, at the same time as they maintain the contact with the ordinary education by teaching ordinary classes.

The school psychological guidance is responsible for the planning and carrying into effect of the special education in school. There is, therefore, a close co-operation between the teachers of the special education in the schools on one hand and the school psychological guidance - particularly school psychologists and consultants for the special education - on the other hand.

The school psychological guidance is free to draw on other experts and to refer families and children to further examination by neurologist, child psychiatrist, and medical adviser.

The schools and institutions in charge of the extensive special education in the 15 counties in Denmark also employ a number of experts to supplement the school psychological guidance with observation and investigation.

The key persons within the schooling

The school psychological examination and guidance is carried out in a close co-operation between parents, classroom teacher, and school psychologist.

The basis of the investigation is always the classroom teacher's and the parents' descriptions of the child, as, in their separate fields, classroom teacher and parents are experts.

The school psychologist observes and describes the child's development and way of functioning, based on conversations with child, teacher, and parents; this work also includes observations of the child during actual instruction and in other connections, as well as psychological tests.

The child's way of functioning

Compared with most other countries, Denmark is a homogeneous country, as regards both social, cultural, and financial conditions.

This means that there are fewer tensions among adults and among children than in many other countries; however, it certainly does not lessen the demands made on the pupils by the parents and the society!

Great importance is attached to the well-functioning of the child in the school and in the class; - the latter is very stable, because, as a rule, there is only a modest change of classmates over the years. During a period of 9-10 years, the average change is "not quite one tenth per year; but it is the same tenth of the pupils who are moving" - it is said. This is not true; but in most school-districts the teacher beginning with 23 pupils in a grade 1 may expect to have 15-18 of these pupils left in his/her grade 9. In most schools, this stability is a very important and positive factor, - at the same time while the importance of the classroom teacher is essential to the individual pupil and to the favourable development of the class as such.

In the school psychological guidance great importance is attached to the social function of the children, not only to their achievements in school.

Since the school psychologist and the teachers of the child have different bases of their observations and evaluations, it is general practice for these persons not to contact each other until this is estimated to be desirable. This procedure provides a mutual correction of the different points of view of the child's situation in school which these different persons are bound to have.

EDUCATIONAL AND PSYCHOLOGICAL TESTS

At the beginning of the 'sixties there was a wide interest in Denmark in the methodology of the reading instruction, particularly the methodology of the special and beginning education.

This interest died away, but at the end of the 'seventies the interest in reading increased again in the Danish school - this time both theoretically and educationally, and also as regards guidance. This is a development-theoretical reorientation which has provided the basis of and the inspiration to the preparation of tests for the study of the reading and writing development throughout the schooling.

At The Danish Institute for Educational Research a number of "reading testing texts" for the study of the pupil's independent reading and reading comprehension are thus developed. The results of these tests are utilized in an educational dialogue between teacher and pupils. These tests are based upon knowledge about the developmental progress of the reading comprehension through the years in school, and so they are not standardized. The characteristics of the "reading testing texts" are that they "look like real books" and that they include texts of both fiction and non-fiction" (Jansen, Johansen & Kreiner, 1987).

A publishing firm, Dansk Psykologisk Forlag, has sent out a number of group reading tests for word reading and sentence reading. The tests are used during the first years in school. The results are evaluated in relation to a set of criteria for the building-up of the basic reading skills. These tests are not standardized either (Nielsen et al., 1986).

For individual testing a test set has been developed consisting of 10 part tests and 11 supplementary tests for ascertainment of the basic reading and writing competence. The test material, called the SUP-tests, is intended for the first years of schooling and also at later stages for pupils with a very poor reading and writing development. The tests are based on a model for reading development, and like the above tests they are not standardized.

In the special education of reading and spelling disabled children and young, a diagnostic process is usually applied. Education and testing accompany each other in an alternating process throughout the special educational treatment.

The psychological tests available for the school psychologist are relatively few in number and of a varying quality. For several years the Danish school psychologists have used a Danish standardization of WISC; however, this must be considered out of date, and today no replacement of it is available.

Danish psychologists also use the various internationally well-known and used tests - some of them partly adapted to Danish conditions, others used in their original versions. The background of this situation - which is not very flattering, when it comes to testing techniques - is that a considerable part of the Danish psychologists (still) refuse the use of tests, on the ground that they find them "labelling, segregating, and subjugating". This attitude which was even more general 10-15 years ago is still seen frequently; so far no alternative immediately applicable procedures have been recommended.

FACILITIES AND METHODS FOR READING REMEDIATION

The two essential principles for the special education in reading (viz. the principle of the least interference and the principle of nearness) have meant that the number of pupils in reading classes has decreased strongly. Instead of this a special education has been built up connected as closely as possible to the home class of the children.

Special education in reading clinic

The most commonly used form of organization is special education in reading clinic. In all other subjects except reading, the child follows its own class. The pupil spends the Danish lessons in the reading clinic where the special teacher takes over the responsibility for the education which is mainly reading education.

In the reading clinic the child receives education in classes of 4-5 pupils. The classes are often made up of different pupils from one lesson to another. This is due to the fact that the children come from different classes and that they are supposed to receive the special education concurrently with the Danish education in the home class.

This form of organization has proved to have some extremely unfortunate consequences: for these pupils the Danish education has been reduced to include mainly reading instruction and in some cases spelling instruction. Thus the pupils in the special education are "cheated out of" the many different kinds of discipline within the Danish education and - especially - the all-round education which is also its aim.

Furthermore, the organization form has meant that the contents of the education have remained unchanged from lesson to lesson. This is due to the fact that the composition of pupils has differed from one lesson to another. The education has been individual, and while the teacher has been working with one pupil, the other pupils have been engaged in independent reading, reading with task solution, and, in some cases, in writing stories or other individual work.

In some fields, the reading clinic was a progress in relation to the reading classes. Now the pupils were able to receive by far the majority of their education in the class in which they started - and to continue the learning of reading in the reading clinic when other pupils no longer needed a basic (elementary) reading instruction. The reading clinics created better readers; but still the rate of development of the individual pupil was often so slow that many pupils continued in the special education in reading clinic for several years. In many cases these pupils expressed that while they were pleased with the reading instruction, they fully realized that they were missing something, because they had to leave their home classes exactly in all or most of the lessons in Danish.

Intensive reading course

As a reaction to the criticism, the special education has in many cases been organized in brief, intensive reading courses. In this connection the principle of the special education taking place while the rest of the class is having a Danish lesson, has been abandoned. Instead of that a reading course of 10-15 lessons a week is effected, and the pupils are removed from the daily instruction in the class in order to receive special education in reading at a reading course for 2-3 lessons every day. The pupils can be removed from any subject, but it is attempted to avoid interference in the pupil's instruction in mathematics and English.

The reading courses take 1-6 months. Gradually it has become general practice to spend three months on a reading course. The reading courses may be repeated with shorter or longer intervals. An intensive reading course has the advantage that the Danish teacher of the pupil retains the responsibility that the pupil receives a versatile Danish education; the special education must alone (or primarily) undertake the reading instruction. The contents of the education are characterized by the fact that the same pupils are participating in the education throughout the course - and (naturally!) by the fact that 2-3 lessons are available every day. Thus, at the reading

course there is time for both an individual work and common activities (such as production of "books", radio plays, and marionette theatre).

In other words, a reading course offers time for concentration and learning and at the same time it offers variation and connection in the special education.

A "combined special education"

A combined arrangement is a special education including 1) a 3 month reading course, 2) a follow-up education consisting of 3-4 lessons a week in the reading clinic, and 3) another 3 month reading course.

In this combined special education it is maintained that reading is a developmental skill; it is expected that the different contents offered within the different forms of organization support the learning of reading which is supposed to consist of:

a phase of recognition
a phase of mastery
a phase of automation.

The education at the first reading course aims at making the pupil realize the necessity of reading and obtain a certain knowledge of what reading is. The follow-up education in the reading clinic meets the demands which occur in the phase of mastery - primarily a number of reading techniques and "strategies" in relation to different reading materials. The second reading course aims at an automation of the reading process - the pupils simply read away.

The combined special education starts in grade 3 when the character of the Danish instruction changes. It no longer consists of elementary reading instruction only, but also of instruction in children's literature, written composition, and spelling. In many cases, 10-15% of the pupils are not ready yet for this change in the contents of the instruction; they are still in the recognition phase of the reading development.

At the first reading course the work is often based on a psycho-linguistic description of the normal process of reading and, at the same time, on the assumption that the pupils have created "inappropriate" or "inadequate" strategies in their first attempts to learn to read. They are "cognitively confused" (Downing, 1981).

As regards special education, the consequence of this assumption is an individual education during which the pupil finds more relevant reading strategies, through help and guidance of the teacher. The individual reading education is followed up by common activities like marionette theatre, reading-educational games, production of "books" for which each pupil writes a chapter together with the teacher. There is also time to discuss the question of "what a reading handicap is".

The follow-up education between the reading courses in the reading clinic often lasts for about a year. The individual reading education continues: the teacher aids the pupil reading unknown texts. By now the pupils have achieved the necessary 'reading strategies', but they still have to consider how to cope with the unknown texts they are faced with. At some point the reading errors drop drastically but the rate of reading has seldom been improved to any considerable extent.

At this point the pupil is ready for the second reading course the purpose of which is to automatize the process of reading. The time in the reading course is primarily spent on independent reading of easy texts of fiction and very easy texts of drama-documentary. Through the school libraries and public libraries in Denmark there is extremely easy access to both good and well-adapted books for children and young people (whereas fewer suitable books are available for reading disabled adults!). The teacher guides the pupils in their choice of books, based on his/her knowledge of their reading level and of the contents of the books and their level of reading technique.

The reading activities and the individual reading instruction continue at this reading course No. 2. In the individual reading instruction (mainly) faction literature and easy books of non-fiction are used.

Totally the combined special education takes about 18 months and is terminated at some point in grade 4. Most of the pupils have now reached a reading stage which enables them to read (fairly well) the reading texts of the class without extra help. In Denmark it is important that the pupils reach this reading stage before grade 5, because in that grade the first instruction in foreign languages starts and also great demands are made on independent reading of the pupils in connection with the instruction in social science and natural science. To a considerable degree, this instruction takes for granted that the pupils are able to read themselves in order to learn that way.

The special education in the class

In order to avoid referring to special education, supplementary support is given in the class, often as a "reading course in the class".

This education partly has a preventing purpose aimed at the pupils who have not had their reading process automatized, and partly it is aimed at pupils who have - in spite of heavy reading difficulties - not been referred to any form of special education. However, it is essential that all the pupils in the class profit by this "reading course in the class" - also the good readers who become even better.

During such a "reading course in the class", a teacher from the reading centre comes into the class during the Danish lessons, bringing quite a few books for independent reading, at different levels of content and reading technique. In some schools, a reading course in the class takes 3-4 weeks and is effected in 5-6 of the Danish lessons of the class. In other schools, such a reading course may take several months, and in such cases similarly fewer weekly lessons are used.

At the reading course the special teacher practises reading with the weak readers. The Danish teacher of the class discusses the contents of the books with the pupils and also practises reading with the somewhat better readers among the pupils.

Special education in the class is also given to pupils with severe reading difficulties who have earlier received special education in reading clinic or at a reading course without their reading skills having been adequately developed for them to participate in the ordinary education.

For each of these 'word-blind' pupils, 4-5 weekly lessons are set aside. Together with the Danish teacher the special teacher organizes an education which renders connection between the education of the pupil in the special education and the education of the rest of the class. The special teacher has the responsibility that the education is both compensating and considerate:

The considerate education is effected by supporting the pupil in connection with the work of the class, e.g. by recording the books of the class and by helping the pupil with the written work.

The compensating education is often given outside the framework of the class, but texts are used which are - when it comes to contents - equal to the material and the subjects with which the rest of the pupils in the class are working - even if they are easier.

RESULTS OF REMEDIAL METHODS USED

Two specific background factors

The following works of development represent different parts of the country and illustrate highly different angles of approach to research and development within the special education.

Firstly, two underlying factors are mentioned which have, at the general level, been essential in connection with changes in the reading education (and thus in the reading competence) which have been obvious for several years:

One factor is a change in the reading competence of the total number of pupils which has, over a number of years, become different, - not poorer, nor better, but different.

The other factor is made up by the materials which constitute the condition of an individualization of the education built up through a couple of generations - primarily supported by the school libraries.

The Matthew tendency

The matter of "declining standards" has also been debated in Denmark - on a basis of knowledge substantiating:

- that today children in Denmark read later than was the case a generation ago. This is a result of the officially wanted educational policy to the effect that the children start a systematic reading education relatively lately (at the age of 6-7-8). It is feared (and rightly so) that a forced learning can be expected to present a strain to the weakest groups of pupils.

Efforts are now being made to start a formalized education (much!) earlier; however, the following wind of these efforts seems to be limited.

- that since the middle of the 1960s the group of good readers has become larger and larger.

- that the best readers today are better readers than their parents were at the same age.

Among other things, the two last-mentioned facts reflect a very literately oriented society and a population which in general reads much; and the children follow suit. Since the first years of the 1960s, the above-mentioned individualization in the teaching of Danish from the age of abt. 8 to the age of abt. 12 has meant that exactly the best readers have profited by being able to work on the basis of their (good) qualifications. - Certainly, the above-mentioned ample supply of children's literature of very different degrees of difficulty and very different contents has also been of great significance to all the pupils.

- that the weakest group of readers has become somewhat larger and now seems to have still greater difficulty in 'catching up'.

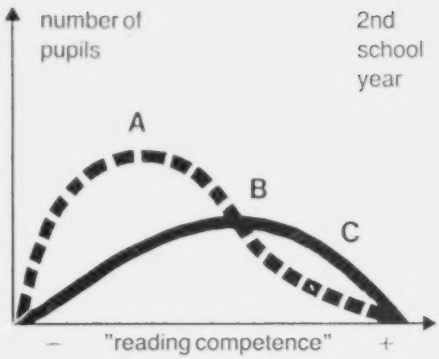
This must give rise to a high degree of concern - and so it has.

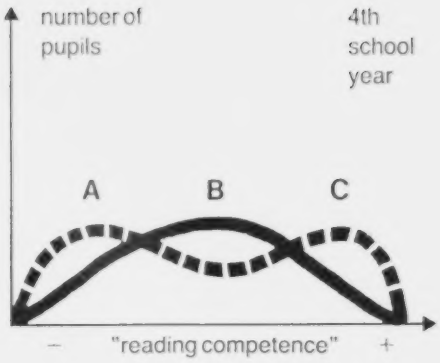
The Matthew tendency which has occasionally been mentioned in the literature has manifested itself more and more strongly in the reading education in Denmark with demands for still better possibilities of individualization, instructional differentiation, etc.

Especially the constant cuts in the time consumption for "reading" and "English" have meant that those of the pupils, who do not learn to read well enough, will generally have still larger difficulties in catching up in a largely literately oriented school - marked by the surrounding literate society.

Figure 2 shows this very clearly.

Figure 2



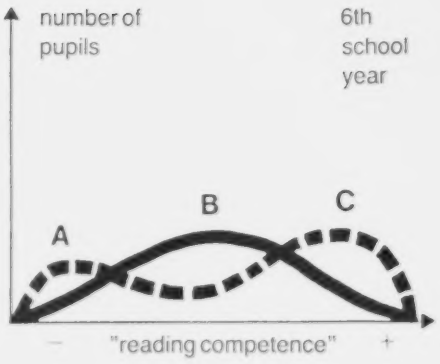


Roughly outlined the development of reading abilities among Danish children looks like this in grades 2, 4 and 6 – earlier and now.

1) generally, they read **later** (not "better" – not "worse");
2) they all read **more** (cannot be seen here);
3) there are **far more** better readers.
4) there are also some who read **too badly** (are "reading handicapped").

earlier

now



The school library and children's library
- a basis of changes in the education

Looking back 50-60 years, the reading education of the school was synonymous with education in reading aloud or recitation, and class instruction was the predominant teaching method.

Since the beginning of the 1950s these two factors have been subject to constant change. Now reading must be characterized as primarily dominated by silent reading followed up by conversation between teacher and pupils and among pupils, and - to a limited extent - by written work. The Danish school uses much fewer work sheets than e.g. most schools in the Anglo-Saxon countries. On the other hand, far more books are used in the Danish classes than in most other countries. In Denmark a considerable part of the class time in reading is spent on the pupil's reading on his own - at least from the age of 8-9. The reason why this is possible is the very extensive development of the school libraries (and incidentally of the public libraries, including the children's libraries) which has been effected during the latest decades.

Until the beginning of the 1980s the children's books expanded both as regards the number of publications and the number of volumes. However, during the last years a financially restrictive policy has considerably limited the public purchase of children's books (and books for adults). On a longer view, radical changes of the reading habits must be expected, and this time negatively, unless the supply of literature for children and young again becomes reasonably ample.

It is noticeable that about half of all children's books written in Danish (which is a small language area with only 5 million people) are written by Danish authors. Primarily, books are translated from Swedish, English, Norwegian, and also some from German and Dutch. These facts reflect the traditional cultural connections between Denmark and foreign countries.

In particular, the growth in the easy literature has been increasing strongly for a number of years, according to Figure 3 and Figure 4. These easy books form the background of the individualization of the reading instruction which has taken place, and which means that there are books for largely every

pupil in a class, not only for the mass readers, but also for the weaker readers.

Figure 3

	1952-54	1966/67	1981/82
Easy books, fiction	148	327	932
School-books	149	243	895
Easy non-fiction	0	241	1.357
	297	911	3.184

The Danish easy literature has a high linguistic and typographical level (and a relatively high level, when it comes to the contents), and at the same time it is strongly objective towards the pupils whose reading is poor. Comparatively many Danish easy books are translated.

In the course of the recent years also easy books of non-fiction have gained a footing as reading matter both in school and, not least, in the leisure time of the pupils - not to replace bigger and more difficult books of non-fiction, but as non-fiction literature which the children read on their own - voluntarily!

A study (Hors & Jensen, 1983) to show which type of literature the children read and whether for use in school or "for fun" is illustrated in Figure 4. As it appears, 76% of the books borrowed by the pupils from the school library were for their private use - for "leisure reading". Even among the books of non-fiction, which made up 29% of the lending, the majority (17%) were borrowed by the children on their own accord and "for entertainment".

Figure 4. The use of the school library books

12%	Mother tongue education (reading and 'English')	1.8%	29% non-fiction
	Non-graded social science and natural science	1.6%	
	History	1.8%	
	Geography	0.8%	
	Biology	1.8%	
	Contemporary history	3.0%	
	Special education	1.0%	
17%	Leisure time reading		
12%	Reading in school		71% fiction
59%	Leisure time reading		

This large consumption of voluntary reading matter does not concern all groups of pupils equally strongly; however, it is characteristic that also the pupils in the special education have the possibility of finding books which they are able to read with profit and pleasure, and they actually do so in many cases. These pupils do not read fewer books than the pupils in the ordinary education, but they read fewer pages; their books are less comprehensive and less demanding.

From independent reading to leisure time reading:

In the middle of the 1970s a general tightening of the financial resources resulted in re-adjustments in school. This meant that the traditional education in "independent reading" was

gradually changed into leisure_time_reading. To the 'mass readers' this presented no problem at all; it only gave rise to some concern about the reading habits of the ordinary readers - a concern which in most cases proved to be unfounded.

On the other hand, it looks as if these changes may very well prove disastrous to the weakest among the disabled readers - and, incidentally, to the majority of the weakly functioning pupils, including largely all the pupils in the special education. It would seem that a deroute in reading for the weakest pupils might become a general problem in school- and certainly for these pupils, cf. below.

Among others, a ministerial committee has called attention to this problem, and it is now being considered to take steps in terms of specific, objective initiatives in order to avert the harmful effects.

A STUDY BASED ON A LONGITUDINAL SECTION
- a regional development work, 1

Gert Gamby

During the years 1984-86 the effects of the special education was measured by Vallensbæk municipality south of Copenhagen, in an empiric study based on a longitudinal section. A total of 25 pupils were followed throughout a special education including a 3 month reading course, a follow-up education of 12 months and a final 3 month reading course. Through tests the qualitative and quantitative aspects of the reading development and the self-evaluation of the pupils were followed.

1) It was the principal hypothesis of the project that the form and contents of the education was meant to support the reading development of the pupils during the three phases mentioned above: the phase of recognition, the phase of mastery, and the phase of automation.

The other hypotheses of the project were the following:

2) that an improved reading stage would result in a more positive self-evaluation immediately after the first reading course and that this positive development would continue throughout the project;

3) that the reading would be improved, especially qualitatively, during the first reading course (the phase of recognition)

4) that the reading would be improved, especially quantitatively, during the second reading course (the phase of automation).

Generally, the results of the project confirm the effects of the special education:

All the pupils became better readers, both qualitatively and quantitatively. The progress is especially remarkable, when seen in relation to the rate of development within the special education.

The hypothesis of the project about the development of the self-evaluation was not confirmed. It was found that the self-evaluation developed positively when the pupils were at the reading course, whereas it developed negatively when they were back in the class. Perhaps the reading competence has not changed adequately after the first reading course for the pupils to be able to live up to the demands made in the class? (which would presumably result in a lower self-evaluation).

The hypotheses 3 and 4 about the development of the reading competence were confirmed, and it must be concluded that also the principal hypothesis can be regarded as being confirmed.

Downing, John: Hvad betyder skolen for barnets læse- og skriveudvikling? Copenhagen: Landsforeningen af Læsepædagoger, 1983. Læserapport 8. Translated from The influence of the school on the child's development of literacy. Presented at "International Symposium on New Perspectives on Reading and Writing", Mexico City, July 1-4, 1981.

Gamby, Gert: Talking books and taped books: Materials for instruction. The Reading Teacher, 1983, Volume 36, No. 4, 366-369.

Gamby, Gert: Nye veje i specialundervisningen (New paths in the special education). Læsepædagogen, 1984, 32(6), 215-226.

Gamby, Gert: Et alternativt specialundervisningsforløb (An alternative special education). Vallensbæk: Pædagogisk psykologisk rådgivning, 1986.

Priors Dukketeatre (Prior's Marionette Theatres), Købmagergade 52, DK 1150 Copenhagen K.

"THE TWO PER CENT MOST HEAVILY READING DISABLED PUPILS"
- a regional development work, 2

Jørgen Christian Nielsen

In Gentofte municipality just north of Copenhagen the local authorities, in 1977, decided to start the decrease and final closing down of the reading classes which had so far received pupils with particularly heavy reading and spelling problems. In future, the pupils were to remain in their classes at the ordinary municipal schools.

This new arrangement was gradually introduced from 1977, and in 1986 it included grade 4 to 10.

Pupils who would earlier have been referred to a reading class are now receiving special education in the municipal school in the form of 4 individual lessons weekly. In a few classes this number may vary from 4 to 7 per pupil. The arrangement includes 100 of the appr. 5,000 pupils in the municipality. These pupils receive a total of 400 lessons of special education given weekly as individual lessons.

Although the lessons are assigned as individual education, they may be arranged according to a concrete estimate to be given as "support in the class".

The selection of pupils takes place once a year through the local "P.P.R." (Pædagogisk-Psykologisk Rådgivning = Pedagogical Psychological Guidance). When the school has received the resources, the Pedagogical-Psychological Guidance instructs special teachers as well as the other teachers about the particular difficulties they will face in this group of children.

The experiences can very briefly be presented as follows:

Naturally, the pupils in question are doing worst in literary subjects. In manual subjects better functions are often seen.

As far as social function as well as social and personal development are concerned, the majority of the pupils are doing well. It is very seldom seen that the social development is described as only "fairly good".

Of course, there are always smaller deviations from a main conclusion, but on the whole pupils, parents, and teachers have been content with the arrangement.

When leaving the municipal school after grade 9 or 10, all pupils are "functional readers" which means that they have a reading stage equal to at least that of grade 4 or 5 - but often better. Generally the pupils have greater difficulty in reaching a similar improvement of spelling competence and formulation skills in writing.

All the pupils in question present themselves for the final examination in the municipal school after grade 9 (possibly also after grade 10). The pupils (naturally) are not doing well regarding spelling. They are doing better in their mother tongue Danish (Danish lessons having written expression as a central issue) - and better still in the oral examination in Danish.

Most of the pupils have "some difficulty" with the first and most important foreign language (English). On the whole, however, they are doing well in arithmetic and mathematics.

In 1986 - almost 2 years after the arrangement has been established in all grades - it can be said to function satisfactorily.

Phipps, Patricia M. & Jørgen Christian Nielsen: From Denmark: A program for maintenance of reading levels. The Reading Teacher, 1987, Volume 40, No. 7, 600-602.

A CROSS-SCANDINAVIAN CO-OPERATION,
A THEORY OF DEVELOPMENT, AND SOME CONSEQUENCES
- a developmental work, 3

Mogens Hansen

During the years 1977-80 the local educational system in Lyngby (a northern suburb of Copenhagen) participated in a Scandinavian research co-operation with Sweden and Norway. The purpose were to study the special education support given to pupils with special-educational needs, and to improve the work of the school psychological guidance. In a project of special education ("SUP") one year of school beginners in grade 1-3 were followed.

In connection with this project a theory has been developed about the gradual cognitive development from the age of 5-6 to the age of 9-11. Within the field of reading, three stages are described:

1. Reading preparation/global cognition: the reading is chiefly directed by syntactic information;

2. Decoding/analytical cognition: the reading is chiefly directed by the graphic and phonetic information of the word;

3. Consolidation/cognition in actual unities: the reading is, in a balanced way, directed by information about the word, syntax, and semantics.

In connection with the project a relevant set of tests was developed for the individual study of the reading and writing difficulties of the appr. 6-9-year-old children.

A "mapping" of children with difficulties in school indicated three groups of pupils:

1. Almost 85% of the pupils learn pari passu with the progression of the curriculum plan;

2. Well over 10% of the pupils develop periodically in imbalance with the demands of the school;

3. 3-4% of the pupils have specific reading problems.

The large group of pupils with difficulties (well over 10%) for which the explanatory concept "imbalance" is used, has resulted in organizatory changes in the special education as well as in a comprehensive innovation within the working process of the special education.

Baltzer, Kirsten, Laura Christiansen, Mogens Hansen, Børge Jensen, Svend Kreiner, Knud Larsen, Erik Laursen, Elisabeth Nielsen & Poul Erik Pagaard: Børns udvikling i de første skoleår (The development of children during their first years in school). Copenhagen: Gyldendal, 1983.

Hansen, Mogens, Svend Kreiner, Lise Kværndrup, Knud Larsen, Erik Laursen & Poul Erik Pagaard: Læse- og retskrivningsudviklingen i de første skoleår - en undersøgelse af elever med skolevanskeligheder (The reading and orthography development during the first years in school - a survey of pupils with difficulties in school).Copenhagen: Dansk psykologisk Forlag, 1981.

Hansen, Mogens, Svend Kreiner & Poul Erik Pagaard: Læseudvikling og undervisning (Reading development and teaching). Horsens: Åløkke, 1986.

Hansen, Mogens, Lise Kværndrup, Knud Larsen, Erik Laursen & Poul Erik Pagaard: Diagnostiske læse- og retskrivningsprøver. Vejledning (Diagnostic reading and orthography tests. A guidance). 2. ed. Copenhagen: Dansk psykologisk Forlag, 1985.

"LINGUISTIC AWARENESS"
- A CENTRAL CONCEPT IN A DEVELOPMENT WORK

Jørgen Frost

During the school year 1985-86 a 4-year work of experiment and development was started in Bornholm (a Danish island in the Baltic), the purpose of which is to describe what importance it has for the reading and spelling competence of the pupils that in the kindergarten class they receive instruction in "linguistic awareness".

The experiment is based on the work of the Swedish researchers, Ingvar Lundberg, Åke Olofsson, and Margit Tornéus, within the same field (Lundberg & Olofsson, 1983, Tornéus, 1983), but is more comprehensive than that, as it involves 224 pupils in the experiment group and 152 pupils in the control group. Ingvar Lundberg is attached to the working group of this experiment which also includes Ole-Peter Petersen, leading school psychologist, and Jørgen Frost, reading consultant.

In the experiment, two tests have been developed for observation of linguistic awareness: an individual test and a screening test for use in groups or in the whole class.

Design: At the beginning of the kindergarten class all the 376 pupils were examined by means of the individual test (pre-test); in this test, also the letter knowledge and the reading competence of the pupils were examined. Moreover, all the pupils were examined by means of tests which partly established the general impressive language skill of the pupils (KTI, Krogh, 1977) and partly their exact word knowledge (Bo Ege, I).

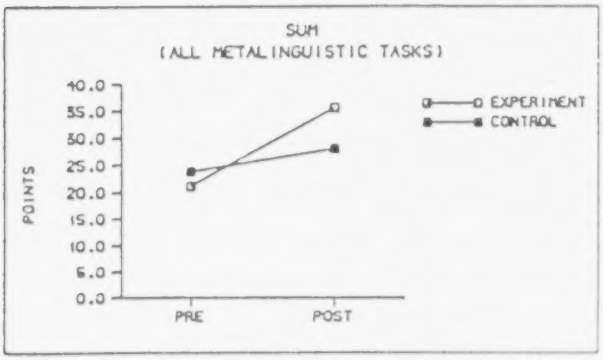
After that, the experiment group was instructed especially during 8 months for 15 minutes every day according to a fixed play programme designed to strengthen the linguistic awareness of the pupils. This programme included the following main elements: rhymes and jingles; limitation of sentences and words; limitation of syllables; analysis of initial sound; analysis of words of 2, 3, and 4 sounds.

After the period of practice, all the 376 pupils were again examined by means of the same tests (post test).

In grade 1 all pupils will be examined again, but this time in reading, spelling, and arithmetic as well as in task solution (via Raven, spec. ed.). In grade 2 and 3 they will all be examined in reading and spelling again.

Results (after the first year): The experiment showed that it is possible to practise the linguistic awareness of the pupils specifically. There was a very distinct difference between the experiment group and the control group ($p < 0.001$) (Figure 5).

Figure 5



The experiment also gave proof that the practice had no influence on the general language comprehension or the letter knowledge of the pupils. In this connection there was no difference between the two groups (Figure 6 and 7).

Figure 6

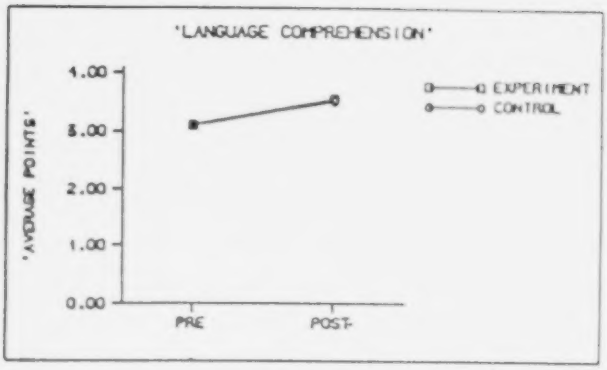
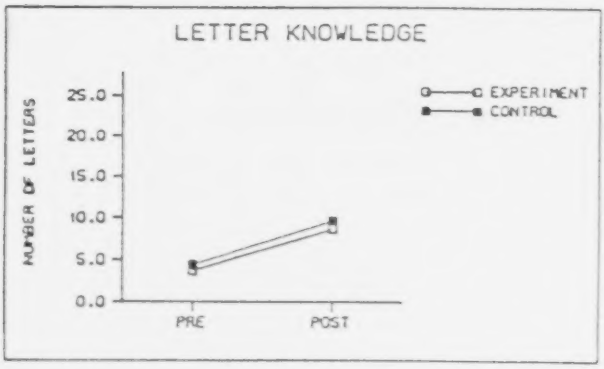
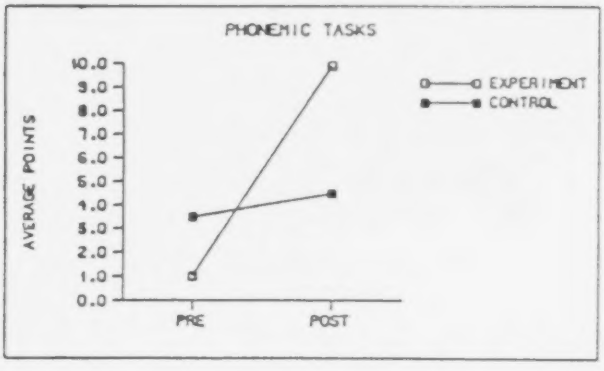


Figure 7



A closer analysis of the results for the linguistic awareness revealed that although there was a significant difference between the control group and the experiment group as regards rhyming skill and skill in limiting words and sentences ($p < 0.01$), an extremely convincing difference was found as regards the development of the skill in phonemic tasks ($p = 0.0001$) (Figure 8).

Figure 8



Ege, Bo: Sproglig test I (Linguistic test I). Herning: Specialpædagogisk forlag, 1969.

Frost, Jørgen et al.: Om sproglig opmærksomhed II (On linguistic awareness II). Rønne: Bornholms Amtscentral, 1987.

Krogh, Tove: Kontrolleret tegneiagttagelse - et arbejdsredskab i begynderundervisningen (Controlled drawing observation - a tool in the beginning instruction). Skolepsykologi, 1977, 14(3), 190-205.

Olofsson, Åke & Ingvar Lundberg: Can phonemic awareness be trained in kindergarten? Scandinavian Journal of Psychology, 1983, 24, 35-44.

Tornéus, Margit: Rim eller reson. Språklig medvetenhet och läsning (Rhyme or reason. Linguistic awareness and reading). Stockholm: Psykologi-Förlaget AB, 1983. Direktrapport 2.

MEDICATION

Drugs are used as a medical treatment for epileptics or children with specific brain damage, especially in the schools for the mentally handicapped. Drugs are not used based on educational diagnosis. Probably this is connected with the fact that special education in Denmark has rarely been inspired by medicine.

JOHN
- A CASE OF SEVERE READING RETARDATION

Gert Gamby

John comes from a well-established Danish middle-class home. In grade 2 he was referred to special education in reading because of heavy difficulties in the subject. According to the report of the speech therapist, the work included discriminating sounds, linguistic syntax and sentence span. The speech therapist concludes that there has been some progress, but that there are still serious auditive difficulties. The sentences of the spoken language are short and ungrammatical, and John has problems with phoneme discrimination. The hearing is normal. The speech therapist recommends special education.

The classroom teacher states that John functions extremely well in the class, but has a low social status among the classmates. However, during recess time he is doing well. John reads very slowly, and he has difficulty in remembering the letters. The connection between letter and sound is missing. John's spelling is very bad, and it is difficult for him to comprehend - and learn - new material.

The parents state that John has shown symptoms of nervousness in connection with his stage in reading. This has been indicated by involuntary discharge of urine and by blinking with the eyes.

John has completed the above-mentioned combined special education in 18 months. At the beginning of the first reading course, a diagnostic reading test showed that John spells a good deal and often with a relatively good result. During his reading John uses mainly graphic and phonetic information and does not utilize the syntax and contents of the sentence at all.

In the individual work at the first reading course it was stressed that John might also use the syntax and semantics of

the text. This work took place during the individual reading instruction where the pupil reads an unknown and unprepared text, guided by the teacher. The teacher advised John to skip the words which he was unable to read - and then read the rest of the sentence. Then he asked John to read the whole sentence once more, and he showed him how both the order of the words and the contents of the whole sentence could assist him when he was to guess a difficult word.

The auditive practice by the speech therapist was followed up with sound analyses of the words which John had difficulty in reading in the unprepared text. This work was particularly concentrated on double consonant in initial sound in front of a vowel. Also rhymes and jingles were included in the work. As it was assumed that John had auditive difficulties, the work with the phonetic drills was moderate with the purpose of establishing to what extent this work would be advantageous. On the other hand, an objective work was done to expand John's vocabulary of immediately read words and sightwords.

At the end of the first reading course, progress could be established. However, the diagnostic reading test showed that John was still mainly using graphic and phonetic information; still, the reading test also showed that John had begun drawing on especially the syntax of the sentence and also a little on the contents of the sentence.

After the first course, John continued for a year with 4 weekly lessons of instruction in the reading clinic. The aim was (still) for John to learn "to draw on the syntactic and semantic information offered by the text". Due to John's auditive difficulties the work included only a small element of letter sounds.

At the end of this year the diagnostic reading test showed that John used the visual information very much, not so much the auditive information. Moreover, there was a tendency that the syntactic and semantic information was used more constantly.

As the number of errors had dropped considerably at the same time, it was decided that John was now to attend the second reading course. Here, the purpose was to automatize the reading process. Therefore, John read many books for independent

reading, while he worked together with the teacher in easy books of faction and subject matter.

By the end of the second reading course the rate of reading had increased considerably, and the diagnostic test showed that John was using the information of the sentence to a still increasing extent; the auditive information was not utilized very much. Considering John's specific auditive difficulties it must be concluded that he succeeded in learning to draw on parts of the text relevant to him and to utilize his (now) relatively strong sides - and finally that he succeeded in automatizing his reading.

John is now doing much better in the class than previously. However, both John and the classroom teacher indicate that the work with reading is still difficult. Perhaps John is an example showing that in some cases it is necessary to continue a special education in the class for pupils with severe specific difficulties.

RESEARCH

Denmark is, economically, a privileged nation enjoying an extremely high standard of living. However, this situation is only reflected to a very moderate degree in the amount of money invested in humanistic research. Scientific and especially technological research have traditionally been the best funded areas, but generally there are only relatively modest funds behind the Danish research as such - in spite of many good intentions and plans to further research. Only 0.54 per cent of all public appropriations are assigned to research and development, i.e. considerably less than in most other European countries.

In the pedagogical-psychological field very few resources have been made available. This is unfortunate, considering that few areas demand a greater amount of national research than the pedagogical-psychological. The basic psychological processes may be universal, but the conditions determining children's development, growth, and profit from education are extremely dependent on national conditions.

For many years we have rather uncritically accepted the educational-psychological results of research, especially from the Anglo-Saxon world. However, one should question this practice since our views on rearing and educating children are decidedly different from the Anglo-Saxon views on several points.

Reading research

Traditionally the reading research in Denmark has been partly developmentally oriented, and partly what would today be called "holistically oriented".

The developmentally oriented works refer to the contents of the education and to surveys on linguistic awareness, and they can be seen in the work carried out in connection with reading with criticism which dominates the developmental work behind the "book-like" testing texts rather than "brief, traditional American-like" reading tests, etc.

The holistic thinking is also seen in the "book-like" testing texts and in the methodology developed in the objective reading courses for children at the middle stages as well as in the further reading for children and young.

An important feature of Danish reading research today is that it is closely connected with practical initiatives which means that the actual developmental work is anchored in theory.

Seen from abroad, the characteristics would probably be the developmental-theoretical orientation and a certain centering in the education on wishes for putting the pupils in a position to work on their own.

During the last two generations the Danish reading research has been Northern-oriented, and the Danish researchers are traditionally seen in teams with or in discussion with other Northern reading researchers: the Danes, S.A. Tordrup and Knud Hermann, together with the Swede, Bertil Hallgren, marked the now classical discussion about dyslexia, neurology, and inheritance. Mogens Jansen, Hans Jørgen Gjessing, and Eve Malmquist were the Dane, the Norwegian, and the Swede, respectively, who, through contacts abroad, internationalized the Northern reading research - a tradition which has become obvious with the Norwegian, Torleiv Høien, working with reading process analysis, the Swede, Ingvar Lundberg, working with reading and linguistics, and Mogens Jansen, known as the educational methodologist holding on to the "normal reading field".

In Denmark the discussion about "bottom-up" and "top-down" was followed at a distance, because traditionally we have a third angle of approach, viz. "middle-out".

Vocably, this tradition is new, but when it comes to the contents - to the effect that in reading education it is always a question of both/and - it is as old as the interest in reading in this country.

The lack of confidence in individual methods as the solution to methodological problems is firmly anchored in the Danish reading tradition which has for many years been dominated by

"mixed methods", cf. Jansen, Jacobsen & Jensen, 1978, the title of which, "The Teaching of Reading Without Really any Method", is more than a play upon words.

Parallel to the support of the very strongly manifested classroom teacher system for a holistically oriented education, an interest emerged in educational testing and diagnosis with the focus on the developmental process of the individual. The two theories developed in parallel, and in practice they were connected in school by a number of tendencies which would today be characterized as "middle-out".

This is probably due to a tradition of combining theories coupled with a general influence from the developmental-theoretically oriented psychology.

"In terms of methodology the Danish psychology is heavily influenced by the Copenhagen school of phenomenological psychology whose best known representative is Edgar Rubin (1886-1951). The Copenhagen school of phenomenology developed in an interaction between Danish philosophers and psychologists from around the turn of the century to 1970; it differs from the phenomenologies developed since Husserl, but has some features in common with the "Gestalt" psychology." (Dollerup et al., 1987).

Presumably, also an abvious social engagement in school has meant that it has been impossible to direct the interest to one final and exclusive objective of the schooling:

There has been a current interest in the schooling of the children from the day they entered school, until they left it - as well as an interest in the reading of the adults. Thus the question of libraries is a central cultural issue in Denmark. This has, i.a., manifested itself in an intense discussion about the relation between the time resources of the school, the quality of the education, and the development of reading tests and curriculum planning.

Instead of quoting a series of papers, reports, and articles, reference is made, in brief, to the works listed below. It is emphasized that there are many projects of development in progress in Denmark in connection with special education. Most

of these are locally inspired; four examples are described above. Two of them are mentioned further below (last). The three first-mentioned examples illustrate quite extensive projects centered on reading. The fourth project has been chosen due to its inter-disciplinary contents:

1:

At The Danish Institute for Educational Research a research group is working at a research project on reading seen in a process of development with the objective of describing 1) reading qualifications, 2) the general reading development in children, young, and adults - and 3) the qualifications of the disabled readers. Working in co-operation on this project are, a.o., the following: Mogens Dalby, superintendent, M.D.; Carsten Elbro, licentiate scholar at the Institute for Audiology, University of Copenhagen, M.A.; Tove Krogh, reading specialist, speech therapist, graduate in education, Søllerød Municipality school district, and Mogens Jansen, research director of The Danish Institute for Educational Research. In addition, there are a few other associates working at the individual part projects.

In the course of this project part-reports are issued all the time, and a considerable amount of literature has been published in connection with the project, some of which is listed below.

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2:

Danish reading research is contributing to a larger Scandinavian reading research project in which Torleiv Høien, Norway, looks at reading especially as a process analysis, Ingvar Lundberg, Umeå, Sweden, looks at reading especially from a linguistic-psychological point of view, Ulla Lahtinen and Kari Tuunainen from the Swedish-speaking and the Finnish-

speaking part of Finland, respectively, write partly on the basis of the bilingualism and partly from a special educational/theoretical angle of approach. The Danish contribution is primarily oriented towards the individuals, viewing their reading competence in an interaction with their environment.

The project is of a modest extent, including only abt. 50 pupils from different places in Scandinavia. However, these pupils are followed very closely, both in school and in their homes.

The first reports were published in 1987, and the project which runs over four years is expected to be finished in 1990-91.

3:

Svend Kreiner and Mogens Jansen have prepared a number of descriptions of the reading development at a sociologically and methodically oriented level.

In connection with the preparation of a new series of "testing texts" The Danish Institute for Educational Research is building on the knowledge obtained. The testing texts integrate knowledge of the reading interests of groups of pupils, of the wishes and expectations of curricula in connection with a non-normative construction of tests which can be seen in close connection with the pronounced development of the leisure reading of the Danish pupils during the last generation.

The work is carried out by a large group of persons, including also Jens Johansen, test theorist.

The most recent publication is: Jansen, Mogens & Svend Kreiner: Fewer Children in School - About Prognoses, High Technology and Educational Consequences. Copenhagen: The Danish Institute for Educational Research, 1985. Especially in connection with the part of the project dealing with reading research also the following publication should be mentioned: Jansen, Mogens & Svend Kreiner: How much worse or better is the Reading of the Children Today - An Account of the Reading Level of Grade 2-5 Pupils for the Years 1976-84, as compared with Previous Years.

Copenhagen, 1986. The Yellow Series. Educational Research Reports, No. 36.

4:

In one project bearing the title: "Low Birth-Weight - An Element of Risk?" - the connection between birth-weight, social background, and difficulties in school is treated. This work which has lasted for several years has yielded a number of reports. Since this is a very comprehensive, inter-disciplinary project, a minute description is given below:

At the University Hospital in Copenhagen pediatricians have made a prospective study of 9182 children born between late September 1959 and late December 1961. Information about pregnancy and delivery has been gathered. Furthermore, the children have been examined during their newborn period and at the age of one. As far as possible the children have been re-examined at 3 and 6 years of age.

349 of these children with a birth-weight of 2500 grs. and below have been followed in their first five years in school. These children were living and going to school in suburban districts of Copenhagen.

Both groups have been tested with the following tests:

Binet-Simon Intelligence Test, Wechler's Intelligence Scale for Children, Leiter's Intelligence Test, Rey's Labyrinth Test, Bender Visual Motor Gestalt Test, Goodenough's Drawing Test, right-left distinguishing test, and speech training tests. Furthermore the children have been tested with oral (vocal) reading tests, silent reading tests, and auditive spelling tests during 2nd, 3rd, 4th, 5th and 6th grade.

In June 1973 the collecting of data was completed through a questionnaire on the kind of special pedagogical arrangements which have been made for the children (classes for borderline mental retarded children, reading classes, special education in reading and mathematics in groups (complementary lessons), education with speech therapists and special arrangements for children with emotional problems).

The children are registered in 5 social-economic status groups. The experimental group is registered in three birth-weight groups: below 1501 grs., 1501-2000 grs., and 2001-2500 grs. The following conclusions are drawn from the analysis of the obstetrical and pediatrical data in relation to school-disorders during the first five years of schooling:

Special education for reading retarded children with a normal IQ

21.7% of the experimental group and 18.3% of the control group have received special education because of reading disabilities. Children with a birth-weight between 1501 and 2000 grs. have a lower percentage of reading disabilities than children with a birth-weight below 1501 grs. and between 2001-2500 grs.

There is a significant relationship between low birth-weight, reading disabilities and socio-economic status. In the experimental group 8.6% of the children from status group 1 received special education because of reading disabilities. 31.8% of the children from status group 5 received such special education.

50% of the boys and 21.4% of the girls with a normal IQ and a low birth-weight from status group 5 had diagnosed reading disabilities.

There is a relationship between low birth-weight, special education because of reading disabilities of children with a normal IQ and the following factors:

Elementary school education of the mothers, mother's age below 21 years, anaemia, symptoms of minimal brain damages in the perinatal period, jaundice during the first days of life, motor retardation at the age of one, a bad health during the first year of life, and symptoms of brain damages at the age of one year.

Children with such complications from status group 5 are more exposed to reading disabilities than children with the same complications from status group 1.

This is illustrated in the following examples:

Complications:	status group:	reading disabilities %
symptoms of brain damages	1	18.2
in the perinatal period	5	46.2
jaundice in the perinatal period	1	6.3
motor retardation	1+2	10.0
at the age of one	5	28.0
symptoms of brain damages	1+2	16.7
at the age of one	5	25.0

5:

In continuation of one of the four previously described local works of development it should be mentioned that this work, No. 1, can be seen as part of a greater whole:

The said building up of reading courses is founded on an analysis of both general developments and individual developments. The work includes a description of the effect of the different instructional measures, when it comes to the strategies adopted and the skills practised as well as to the self-confidence which can be noticed in the reading development of the pupils.

This is a project which is clearly objective towards the special education. As far as literature is concerned, reference is made to the literature mentioned previously.

6: In connection with the development model described in the total development project, No. 3, it can be added that the theory in question includes the years from the age of appr. 5 to the age of appr. 10.

Accounts on the project are made currently and in particular an account called "Reading Development and Education" should be

mentioned. This account which has just been published, describes 470 children who have been followed closely through their first three years in school. The work is effected in such a way that the interplay between theory and practice can be seen.

The reading process can be described via three 'stages': The global stage = reading preparation; the analytical/synthetic stage = decoding; the holistic stage = consolidating reading.

At the first stage the reading is marked by a strategy based on guessing/anticipation and utilization of the knowledge of the syntax of the spoken language.

The second stage is marked by part-processing with the attention focused on the individual word and by work with letters and syllables.

The third stage creates a balance between work based on the context (syntax and semantics) and work based on the words (graphemes, phonemes, and morphemes).

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It must be strongly emphasized that in the above importance has been attached to giving examples - if only a few - of the Danish reading research both within the special education and within the ordinary field.

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